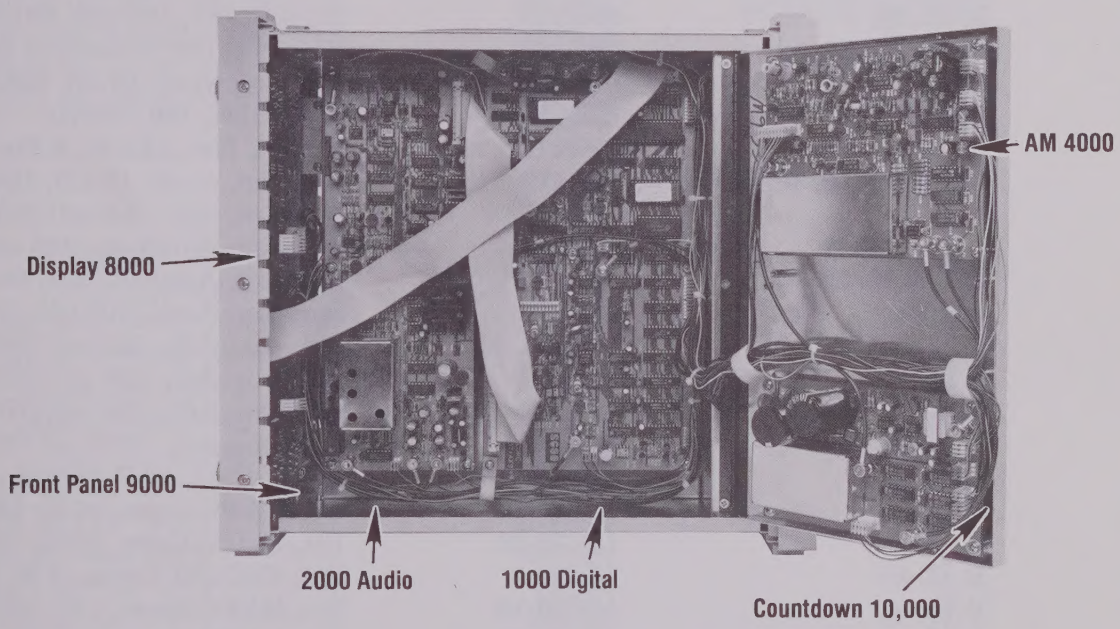
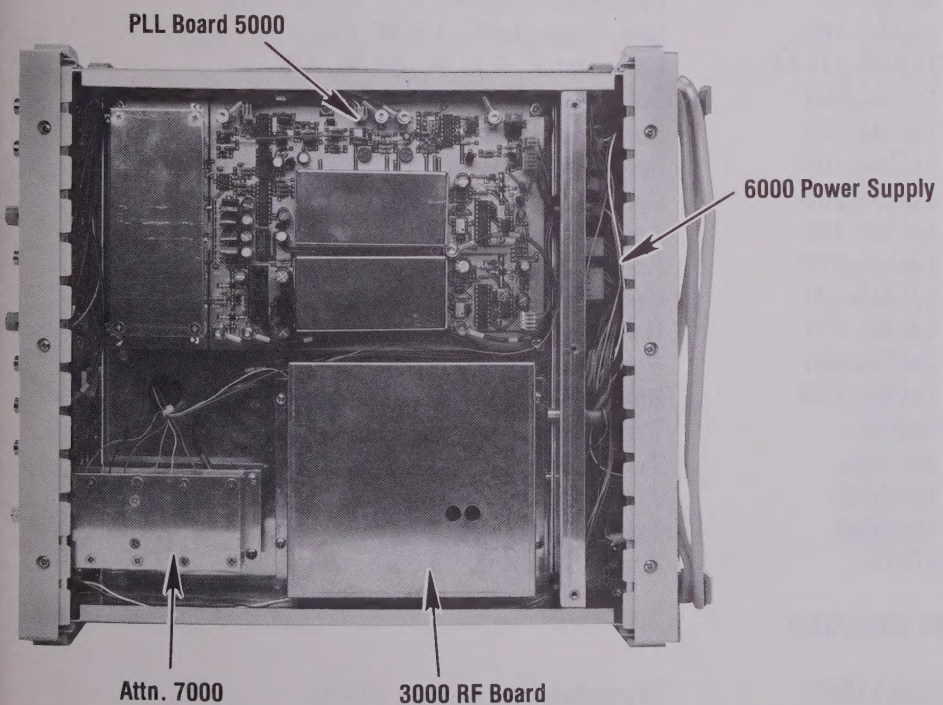
SG80

AM Stereo—FM Stereo Analyzer

Schematic & Parts List





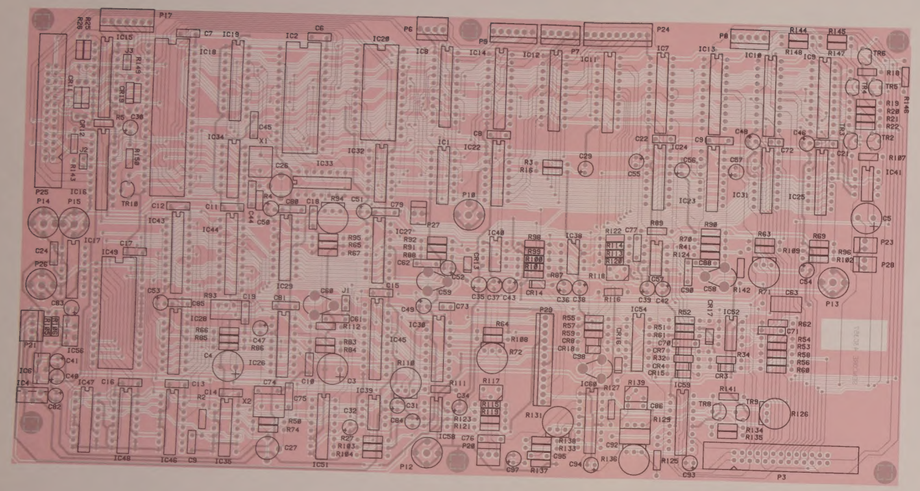
Index

Board Number	See Sheet
1000	3
2000	4
3000	5
4000	5
5000	6
6000	7
7000	7
8000	8
9000	8
10,000	8

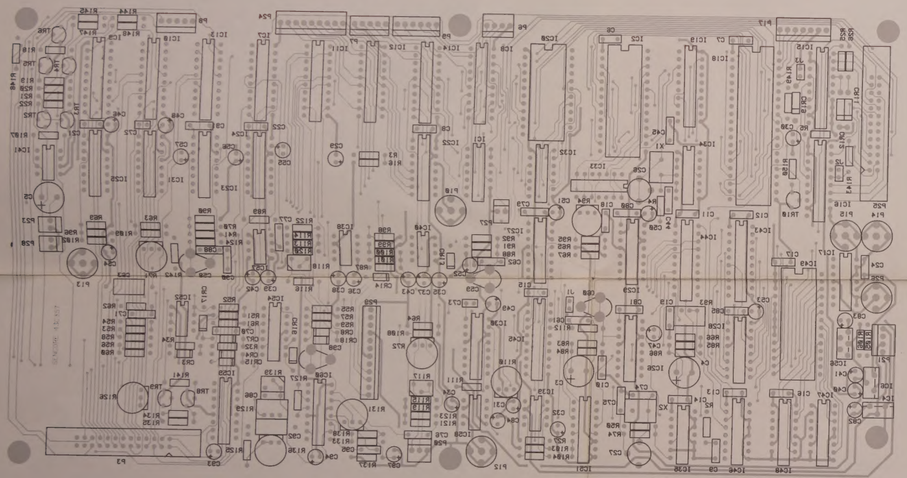
This sheet includes parts list.

SHEET 1

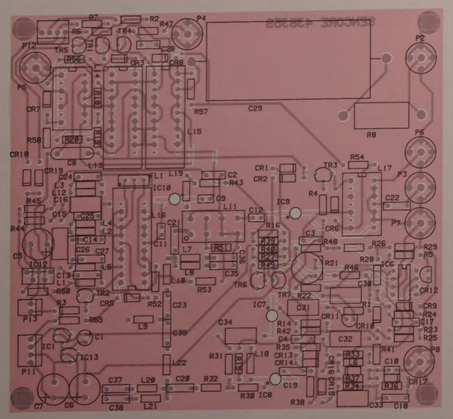
SCHEMATIC REFERENCE	PART NO.	DESCRIPTION
Digital Board (1000 BOARD)		
C 3-5	24G447	Cap, Rlytic, 100 uF, 16 V, 10%
C 6-18	24G483	Cap, Mylar, .01 uF, 50V, 5%
C 21, 22	24G483	Cap, Mylar, .01 uF, 50 V, 5%
C 24, 86	24G482	Cap, Mylar, .1 uF, 50 V, 5%
C 26, 27	24G387	Cap, Trim, 2.5-18 pF
C 29-32, 34-43, 82-84, 97	24G382	Cap, Rlytic, 10 uF, 16 V, 20%
C 44, 45	24G86	Cap, Disc, 10 pF, 500 V, 10%, NPO
C 46-57	24G384	Cap, Lytic, 2.2 uF, 50 V, 20%
C 58-60	24G474	Cap, Trim, 5.1-50 pF, 250 V
C 61, 62	24G77	Cap, Disc, 20 pF, 500 V, 5%, NPO
C 63, 72, 73	24G368	Cap, Disc., .001 uF, 100 V, 10%
C 70, 71	24G485	Cap, Mylar, .047 uF, 50 V, 10%
C 74, 75	24G157	Cap, Disc. 25 pF, 500 V, 5%, NPO
C 76, 77	24G190	Cap, Disc, 180 pF, 500 V, 10%
C 79-81, 91	24G314	Cap, Disc. 15 pF, 500 V, 5%, NPO
C 88	24G53	Cap, Disc, 30 pF, 500 V, 5%, NPO
C 90	24G113	Cap, Disc, 270 pF, 500 V, 10%
C 92	24G183	Cap, Poly, .01 uF, 33 V, 5%
C 93, 94	24G450	Cap, Rlytic, 1 uF, 50 V, 20%
C 95	24G487	Cap, Mylar, .0022 uF, 50 V, 5%
CR 11, 12	50C3-2:A	Diode, Germ, 20 V, 1N695
CR 3-10, 13, 14	50C5-2:A	Diode, Sil, 75 V, 4148
IC 1	69G7-B	IC, Gate, Nor, QUAD, 4001B, CMOS
IC 2	69G266	IC, EPROM, 27C256/12.5 PRGMNG
IC 4	69G116	IC, Reg, -5V, 100 mA, 79L05
IC 6	69G70	IC, Reg, +5V, 500 mA, UA78M05UG
IC 7-14	69G302	IC, Flip-Flop, 74HC374, "D", Tri-S
IC 15, 16	69G298	IC, Converter, A/D, ADC0838
IC 17	69G42	IC, Counter, Decade, 74LS90
IC 18	69G322	IC, CMOS Micro, 80C31
IC 19	69G202	IC, F-Flop, "D", Octal, 74C373
IC 20	69G299	IC, RAM, 2 K X 8, HM6116
IC 22-31	69G303	IC, D/A, 8-Bit, Sel 1, DAC0802
IC 32, 33	69G208-B	IC, Gate, AND, QUAD, 4081
IC 34	69G61	IC, Gate, AND, QUAD, 74L208, TTL
IC 35	69G244	IC, CMOS, QUAD 2 In. NOR, 74HC02
IC 38, 39	69G80	IC, Op-AMp, Single, MOSFET, CA3140
IC 40	69G330	IC, Buffer, Pwr Amp, EL2003
IC 41	69G63	IC, Op-Amp, Single, Bifet, TL081
IC 43-45	69G91	IC, F-Flop, Octal "D", 74LS377, TTL
IC 46	69G179	IC, Decoder, 74HC138, CMOS
IC 47, 48	69G319	Up/Down Binary Counter
IC 49	69G203	IC, EPROM, 27C64
IC 51	69G64-B	IC, Switch, Triple, 4053B
IC 52, 57	69G189	IC, Op-Amp, Dual, Bifet, TL082
IC 54, 55	69G46	IC, Op-Amp, QUAD, Bifet, TL084
IC 56	69G195	IC, Reg, Adj, 1.5A , LM2931
IC 58	69G328	IC, Op-Amp, NE5534, Lo Noise
IC 59, 60	69G255	IC, Sinewave, VCO, XR2206
R 71	15C26-11	Pot, MVPC Cerm, 200 K, 1/2 W, 20%



"1000" DIGITAL BOARD (Component View)



"1000" DIGITAL BOARD (Foil View)



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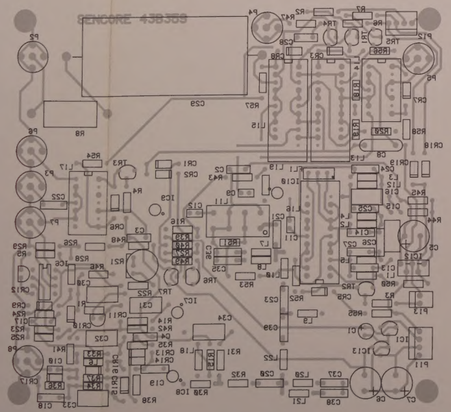
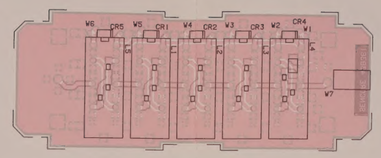
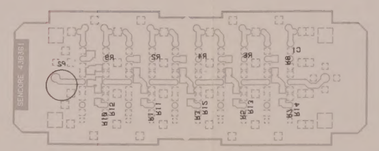


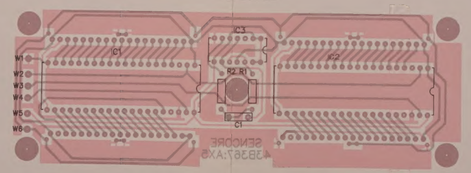
"3000" RF BOARD (Foil View)



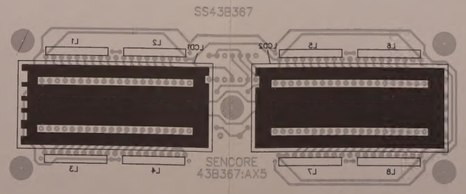
"7000" ATTENUATOR BOARD (Component View)



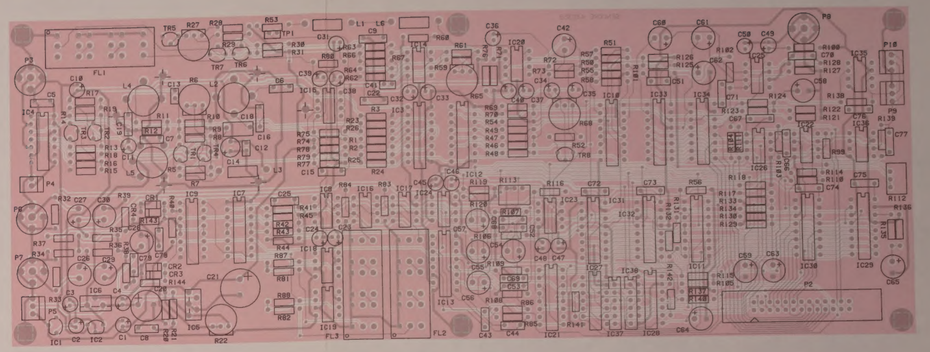
"7000" ATTENUATOR BOARD (Foil View)



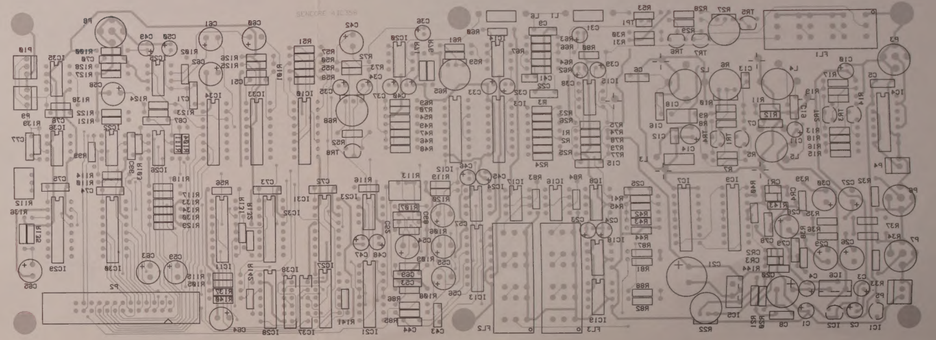
"8000" DISPLAY BOARD (Component View)



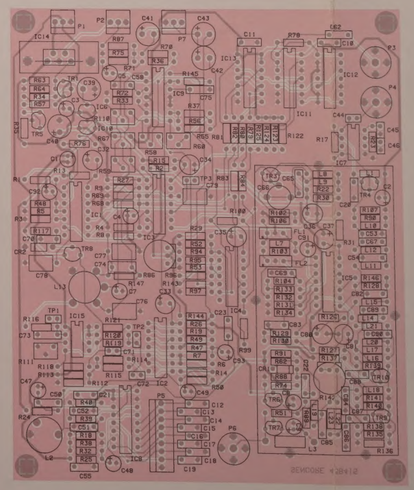
"8000" DISPLAY BOARD (Foil View)



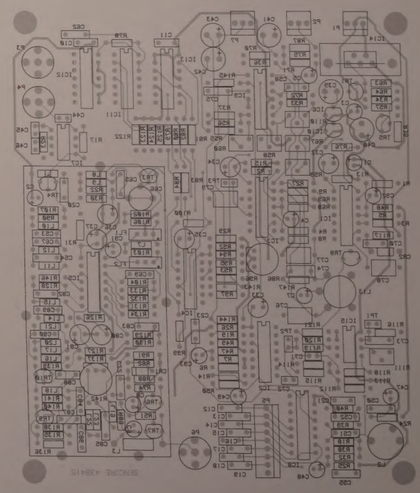
"2000" AUDIO BOARD (Component View)



"2000" AUDIO BOARD (Foil View)



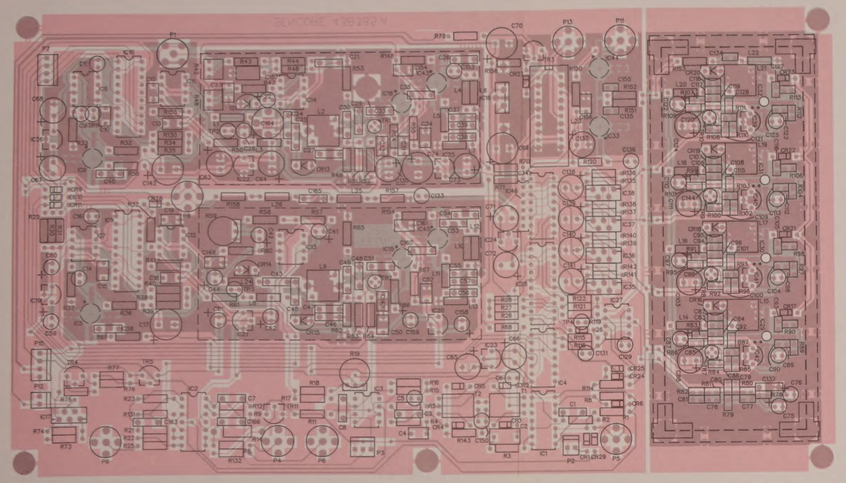
"4000" AM BOARD (Component View)



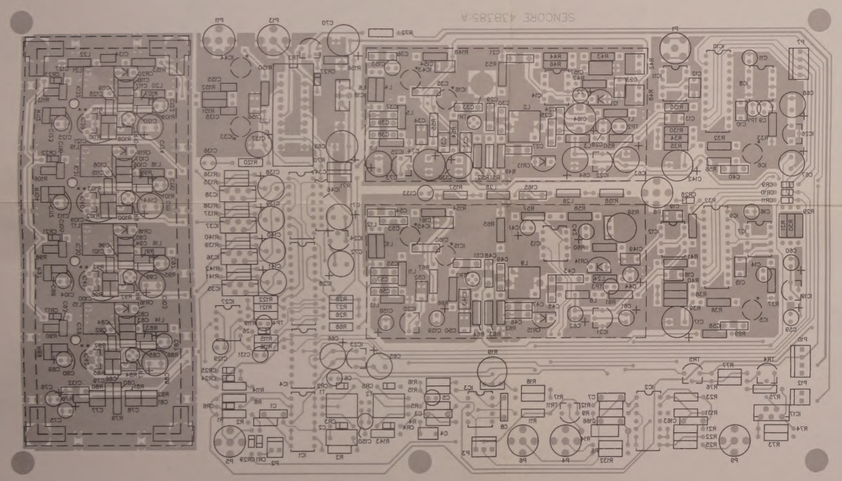
"4000" AM BOARD (Foil View)

This sheet includes PC board layouts.

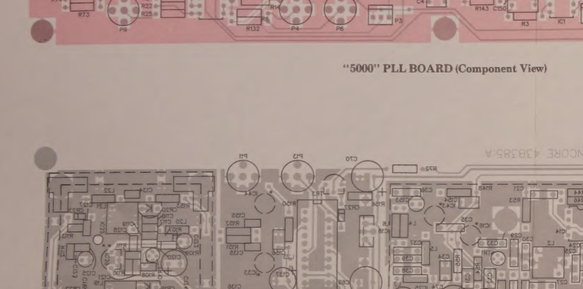
SHEET 2



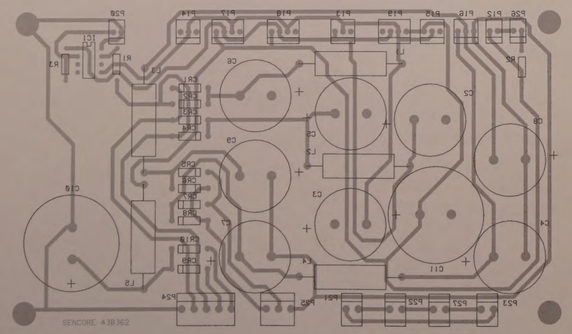
"5000" PLL BOARD (Component View)



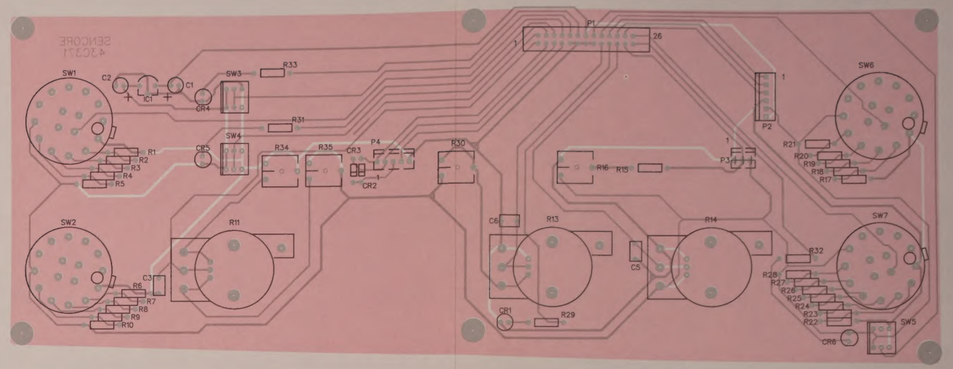
"5000" PLL BOARD (Foil View)



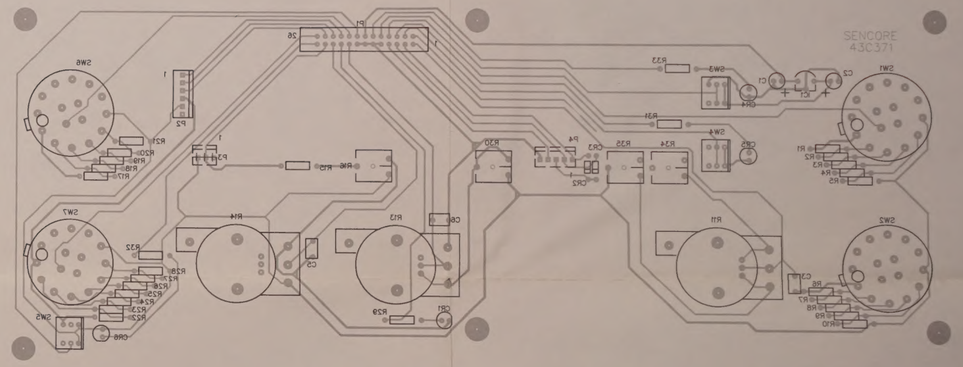
"6000" POWER SUPPLY BOARD (Component View)



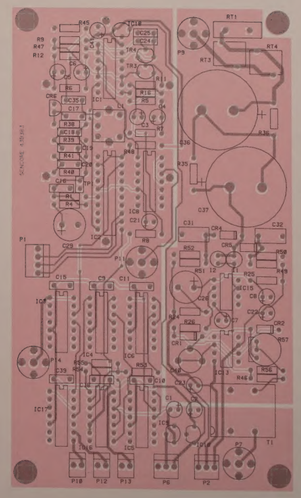
"6000" POWER SUPPLY BOARD (Foil View)



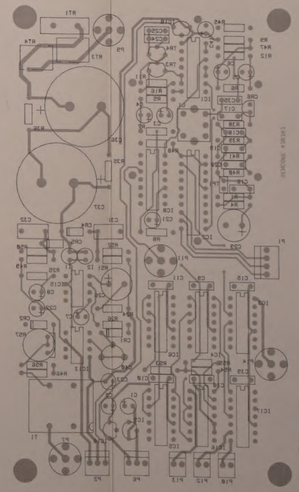
"9000" FRONT PANEL BOARD (Component View)



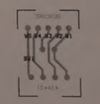
"9000" FRONT PANEL BOARD (Foil View)



"10,000" COUNTDOWN BOARD (Component View)



"10,000" COUNTDOWN BOARD (Foil View)



SWITCH BOARD (Component View)

COUNTDOWN AUDIO PROTECTION BOARD
4.3B383
10,000 BOARD

AUDIO BOARD
4.3C358
2000 BOARD

AM BOARD
4.3B415
4000 BOARD

DISPLAY BOARD
4.3B367
8000 BOARD

FRONT PANEL
4.3B371
9000 BOARD

DIGITAL BOARD
4.3C357
1000 BOARD

PLL BOARD
4.3B365
5000 BOARD

RF BOARD
4.3B359
3000 BOARD

POWER SUPPLY BOARD
4.3B362
6000 BOARD

ATTENUATOR BOARD
4.3B361
7000 BOARD

SENCORE INC.
SG80 BLOCK DIAGRAM

This sheet included Block Diagram, board numbers 1000

SHEET 3

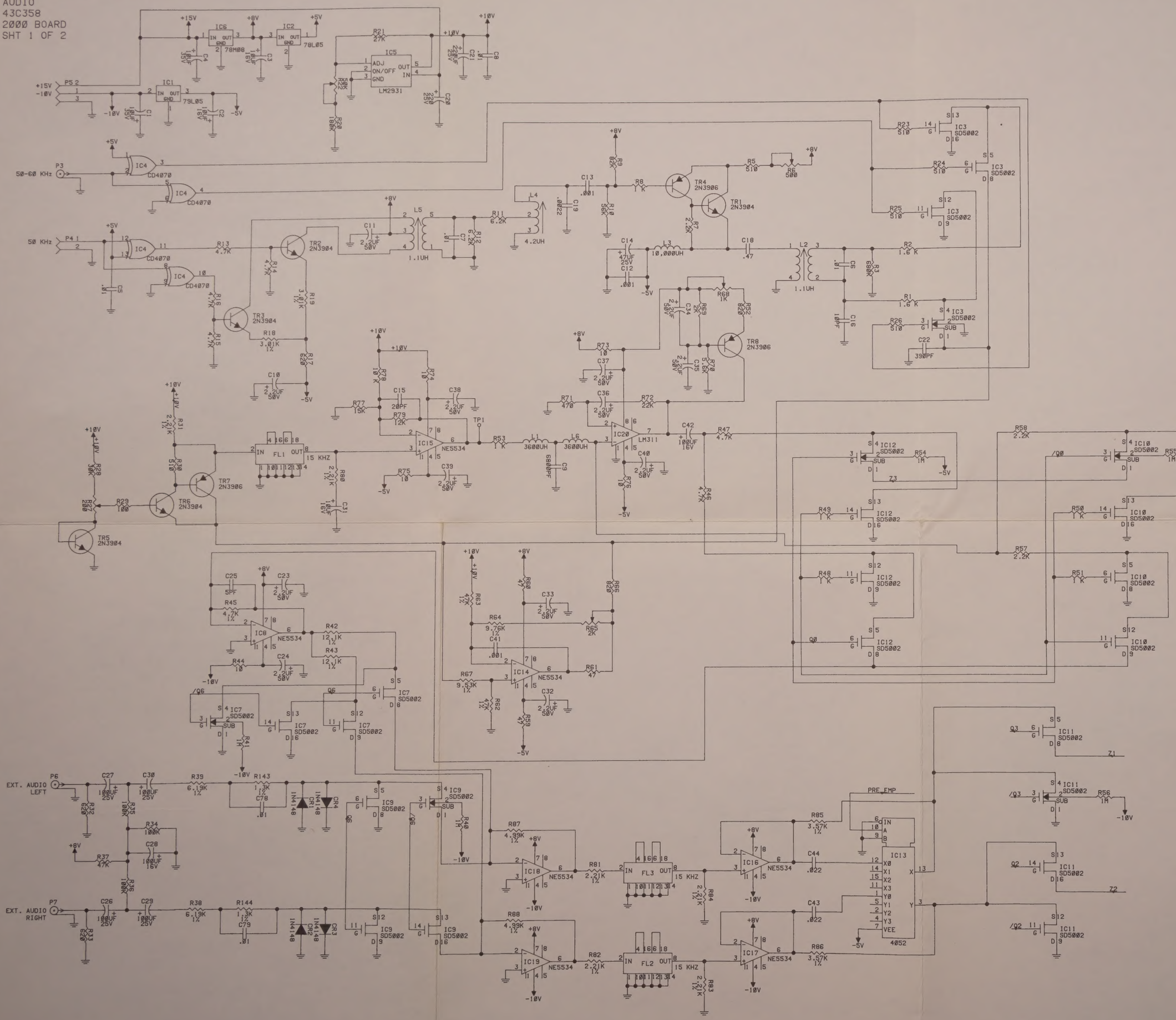
DIGITAL/MPX
43C357
1000 BOARD

"1000" DIGITAL BOARD
PART 1 OF 2

DIGITAL/MPX
43C357
1000 BOARD

"1000 DIGITAL BOARD
PART 2 OF 2

AUDIO
43C358
2000 BOARD
SHT 1 OF 2

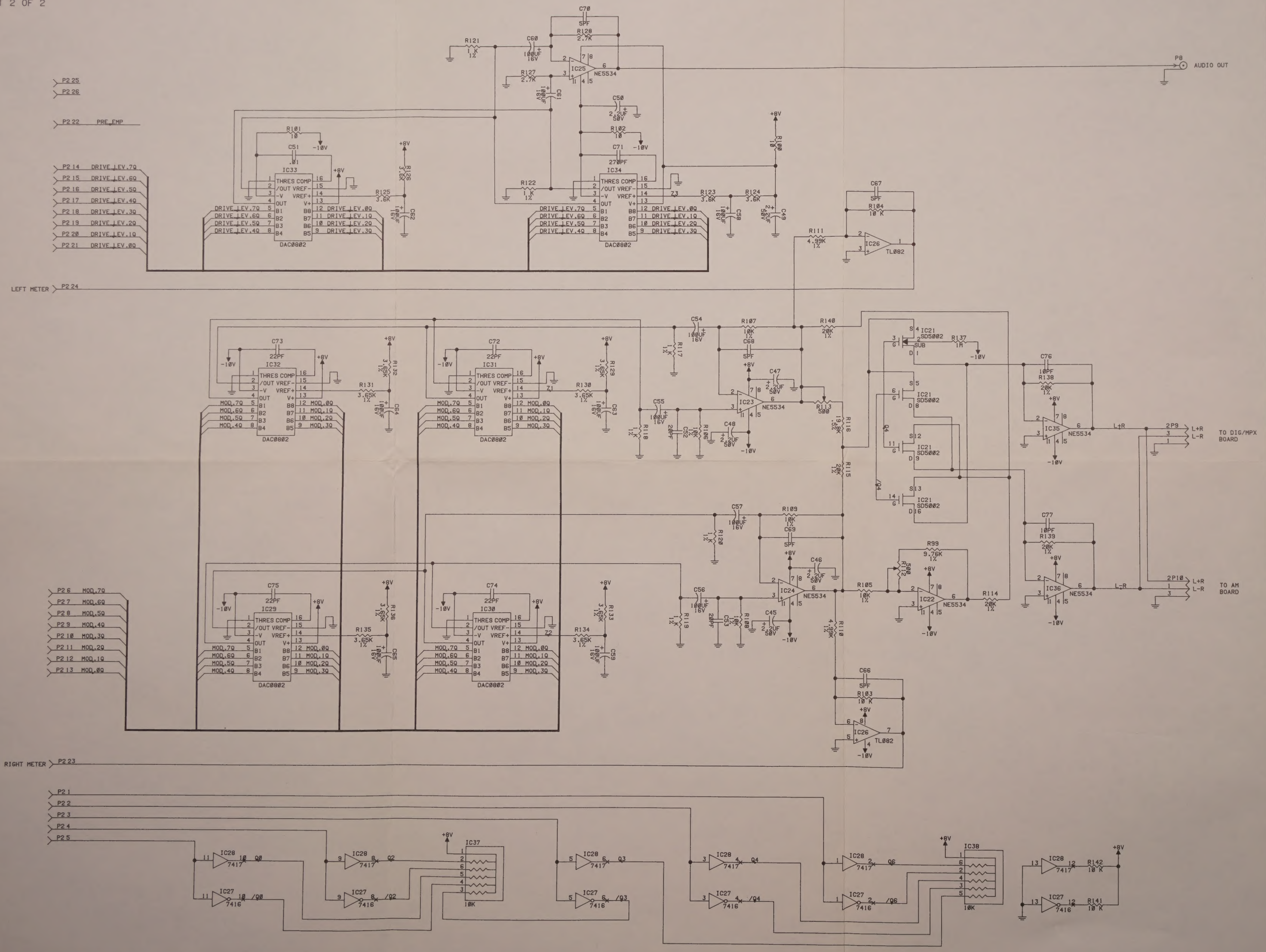


"2000" AUDIO BOARD
PART 1 OF 2

This sheet includes board numbers 2000

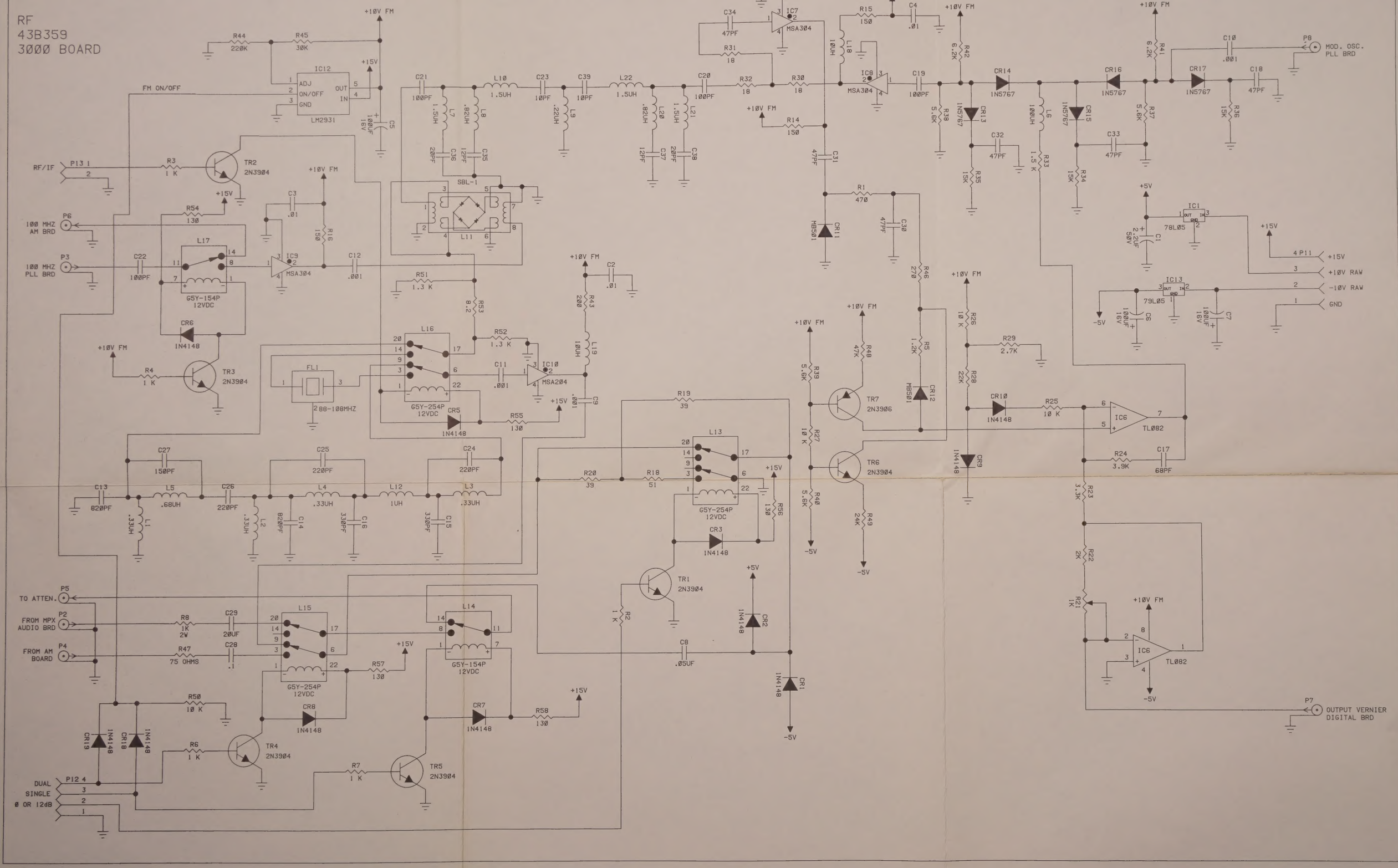
SHEET 4

AUDIO
43C358
2000 BOARD
SHT 2 OF 2



"2000" AUDIO BOARD
PART 2 OF 2

RF
43B359
3000 BOARD

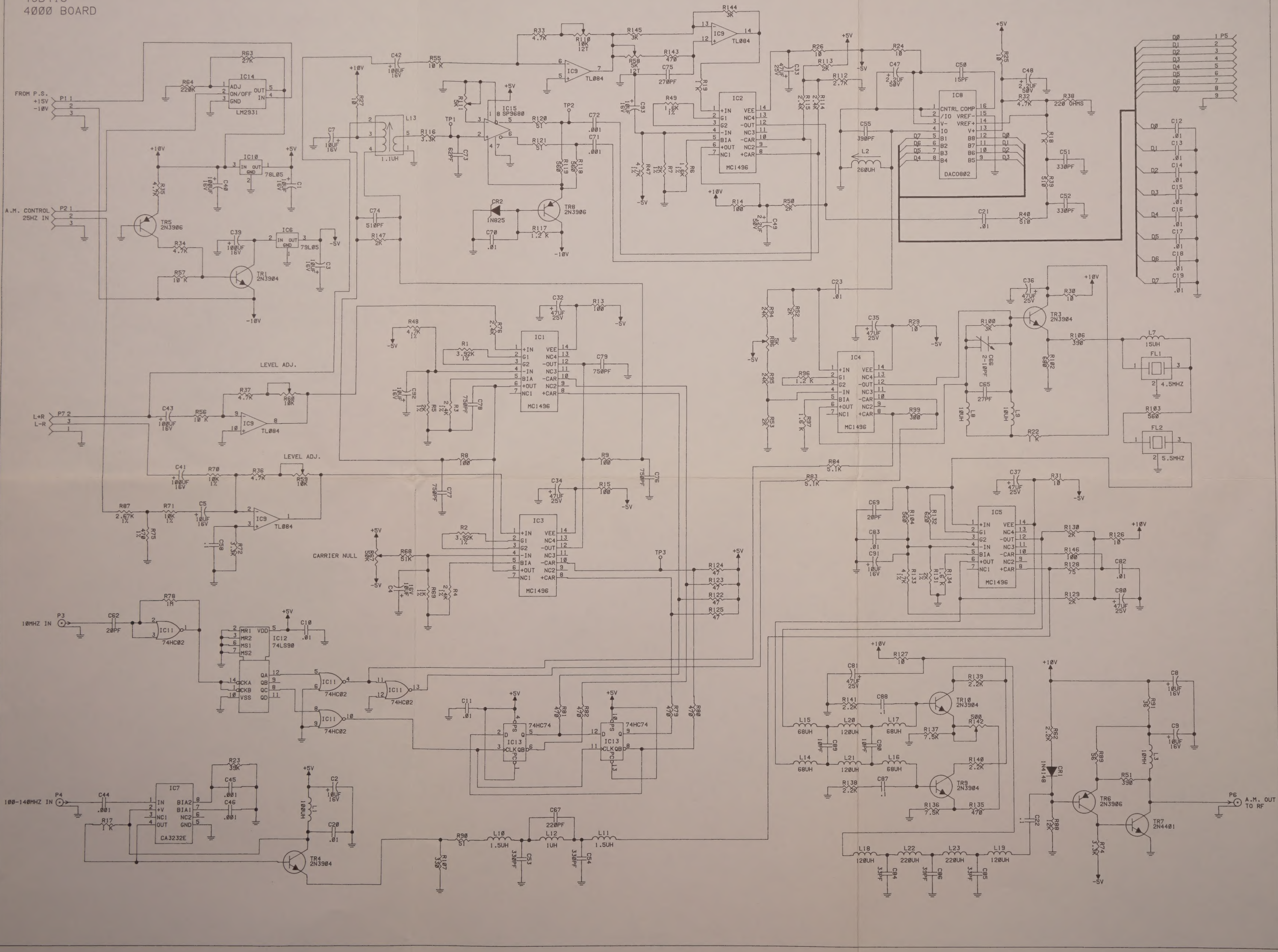


"3000" RF BOARD

This sheet includes board numbers 3000, 4000

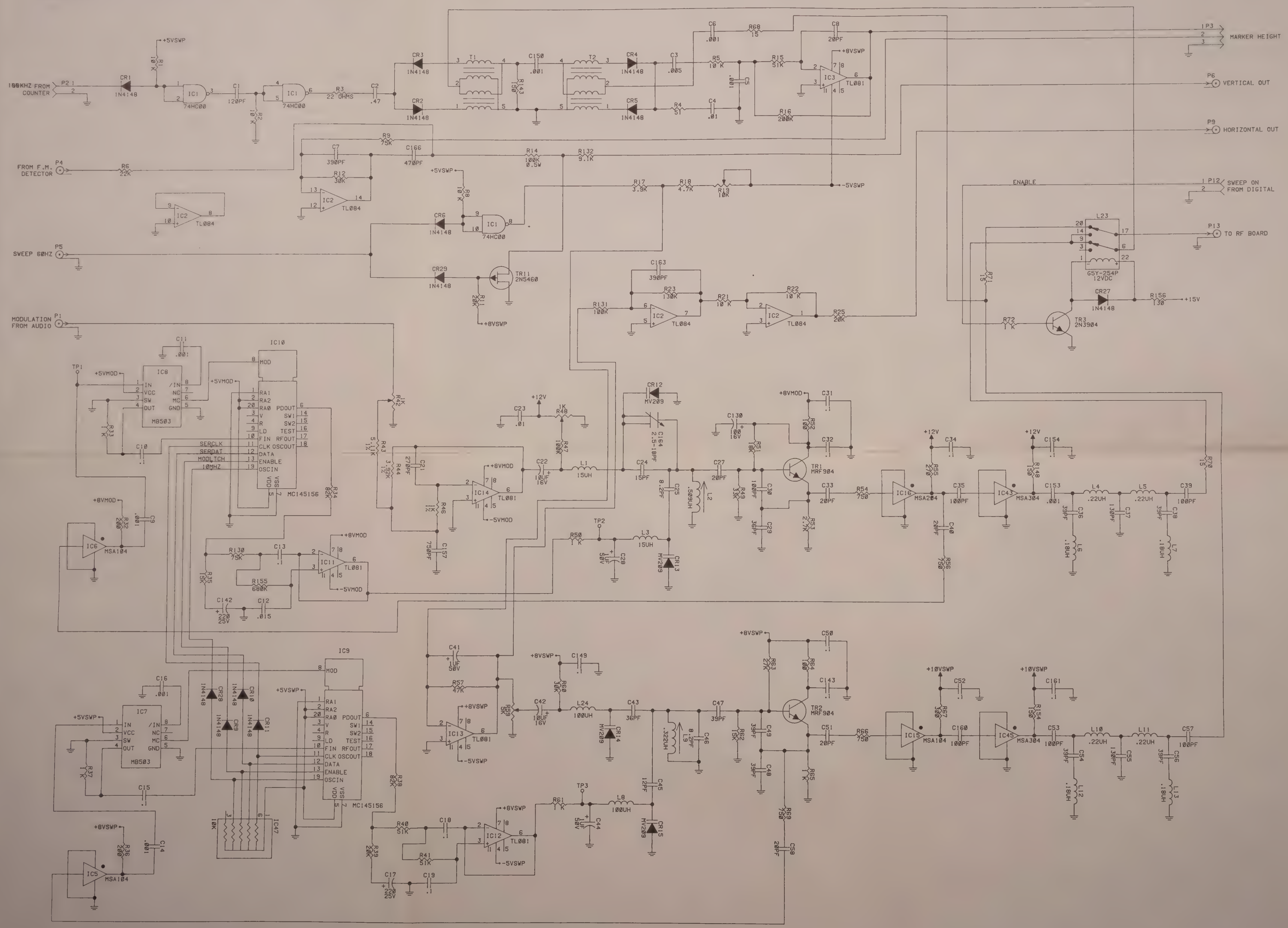
SHEET 5

A.M.
43B415
4000 BOARD



"4000" AM BOARD

P.L.L.
43B385
5000 BOARD

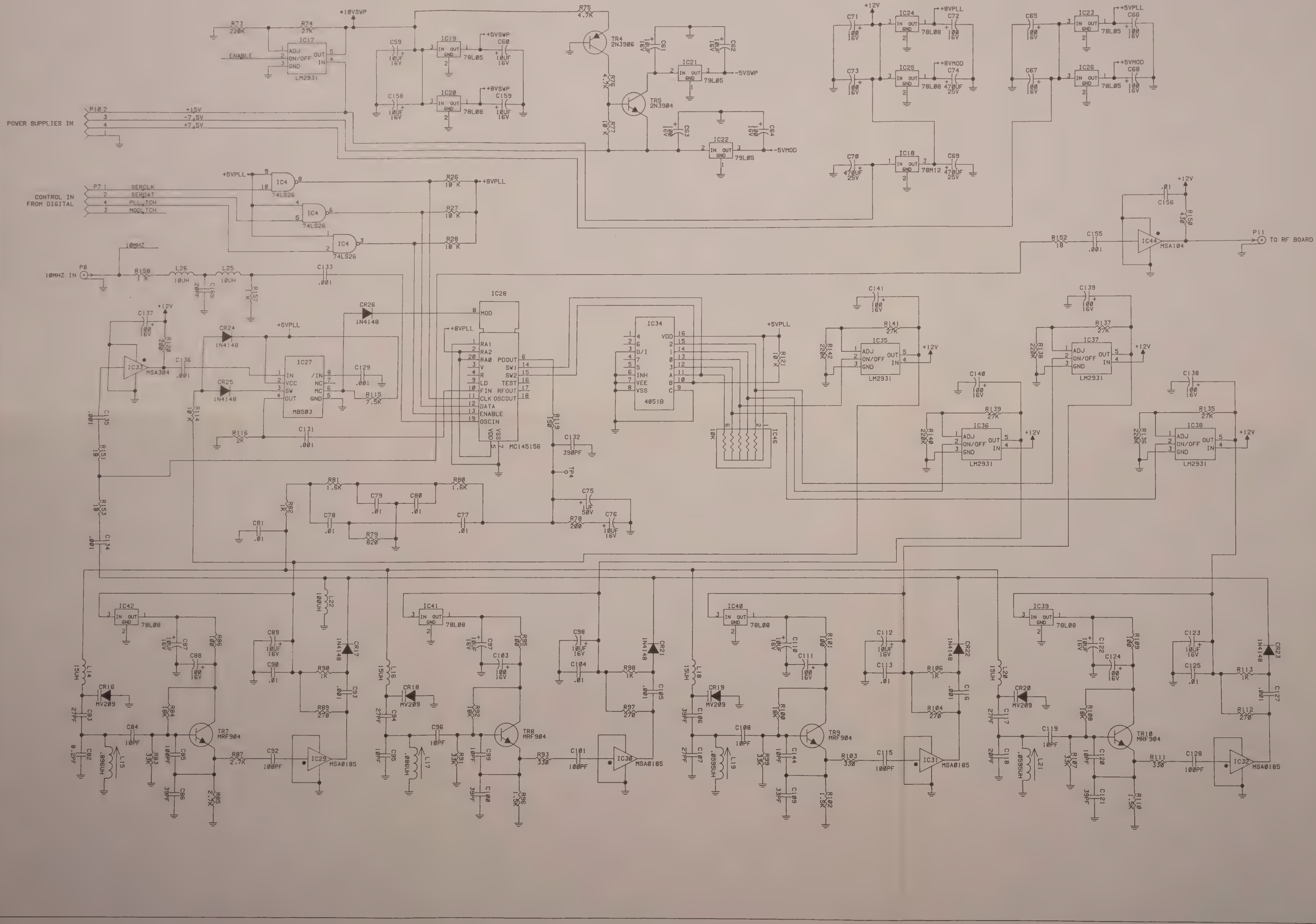


"5000" PLL BOARD
PART 1 OF 2

This sheet includes board numbers 5000

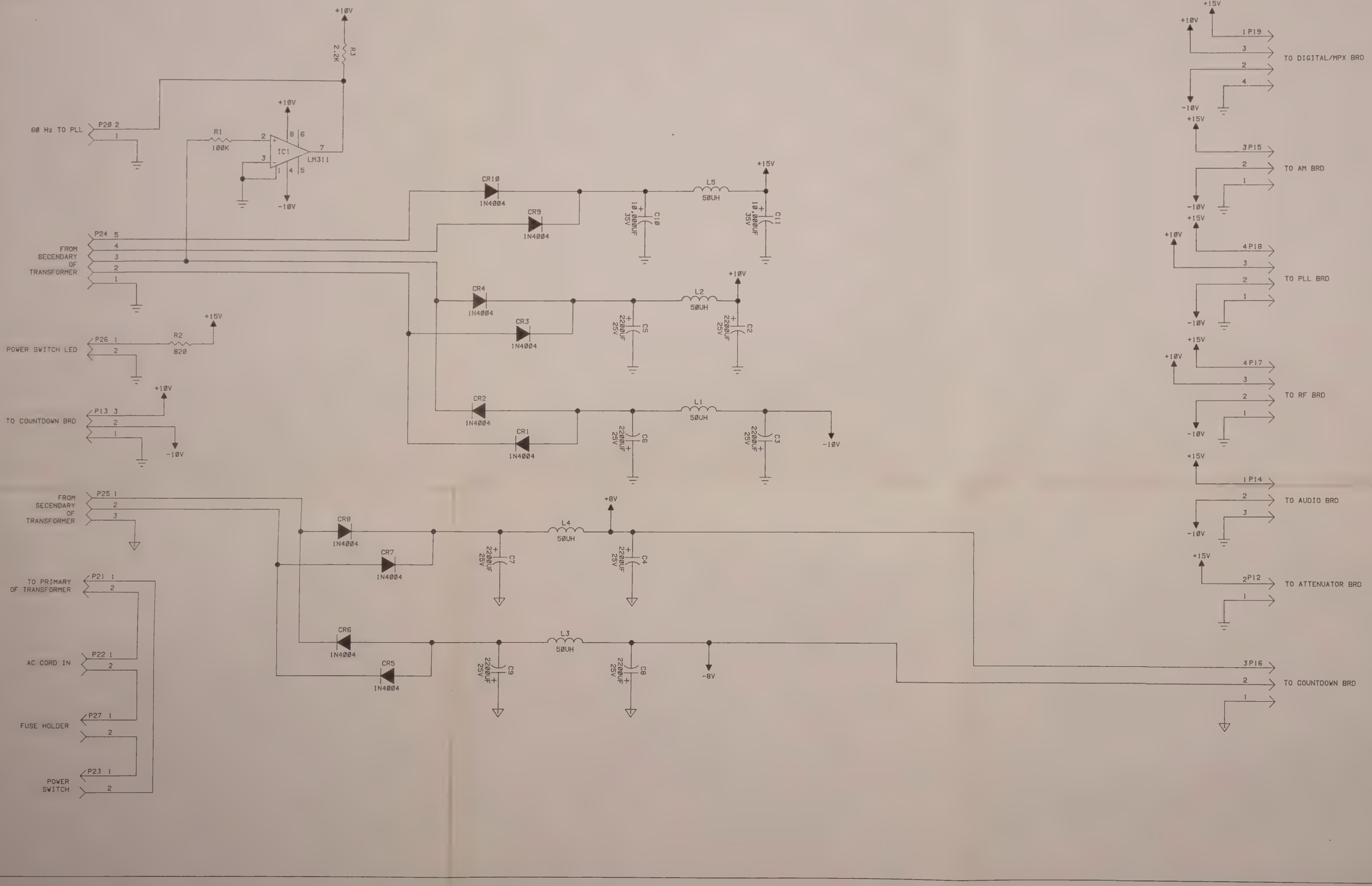
SHEET 6

P.L.L.
43B385
5000 BOARD



"5000" PLL BOARD
PART 2 OF 2

SG80 POWER SUPPLY
43B362
6000 BOARD

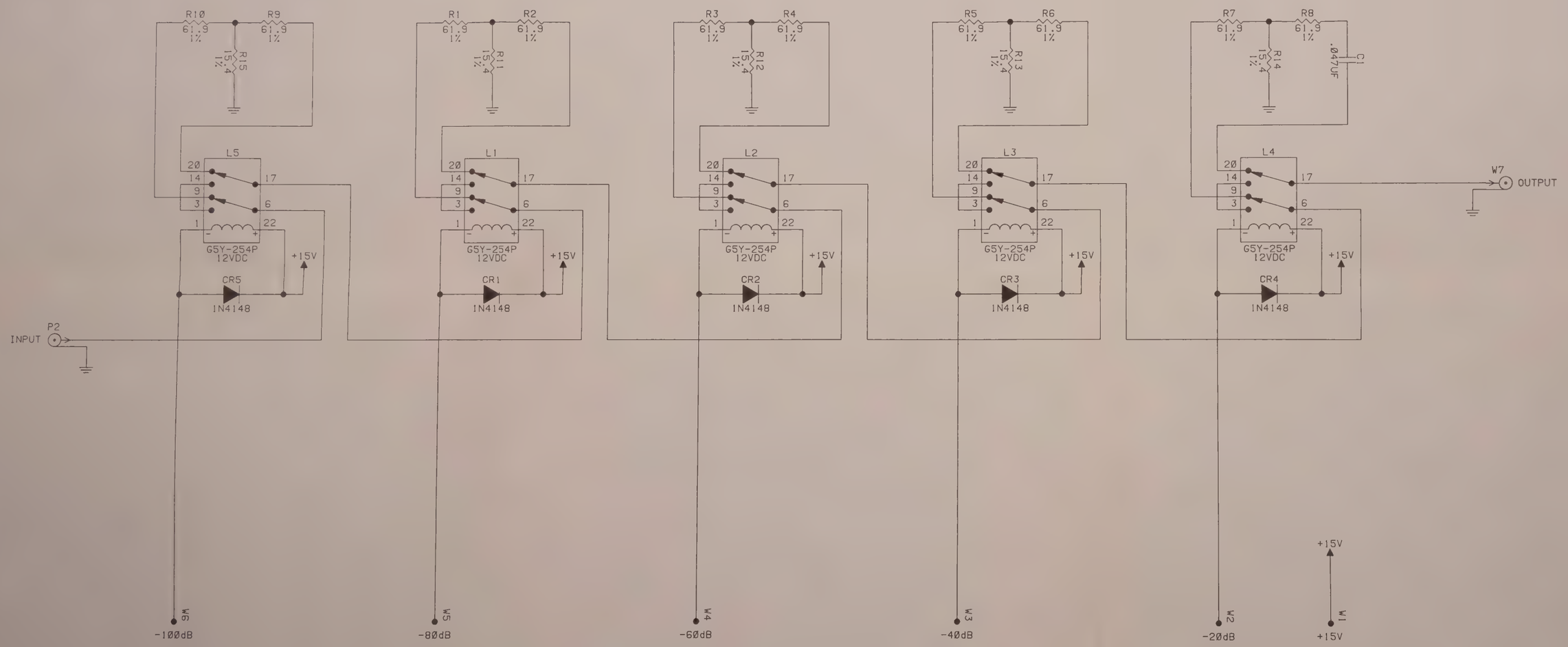


"6000" POWER SUPPLY BOARD

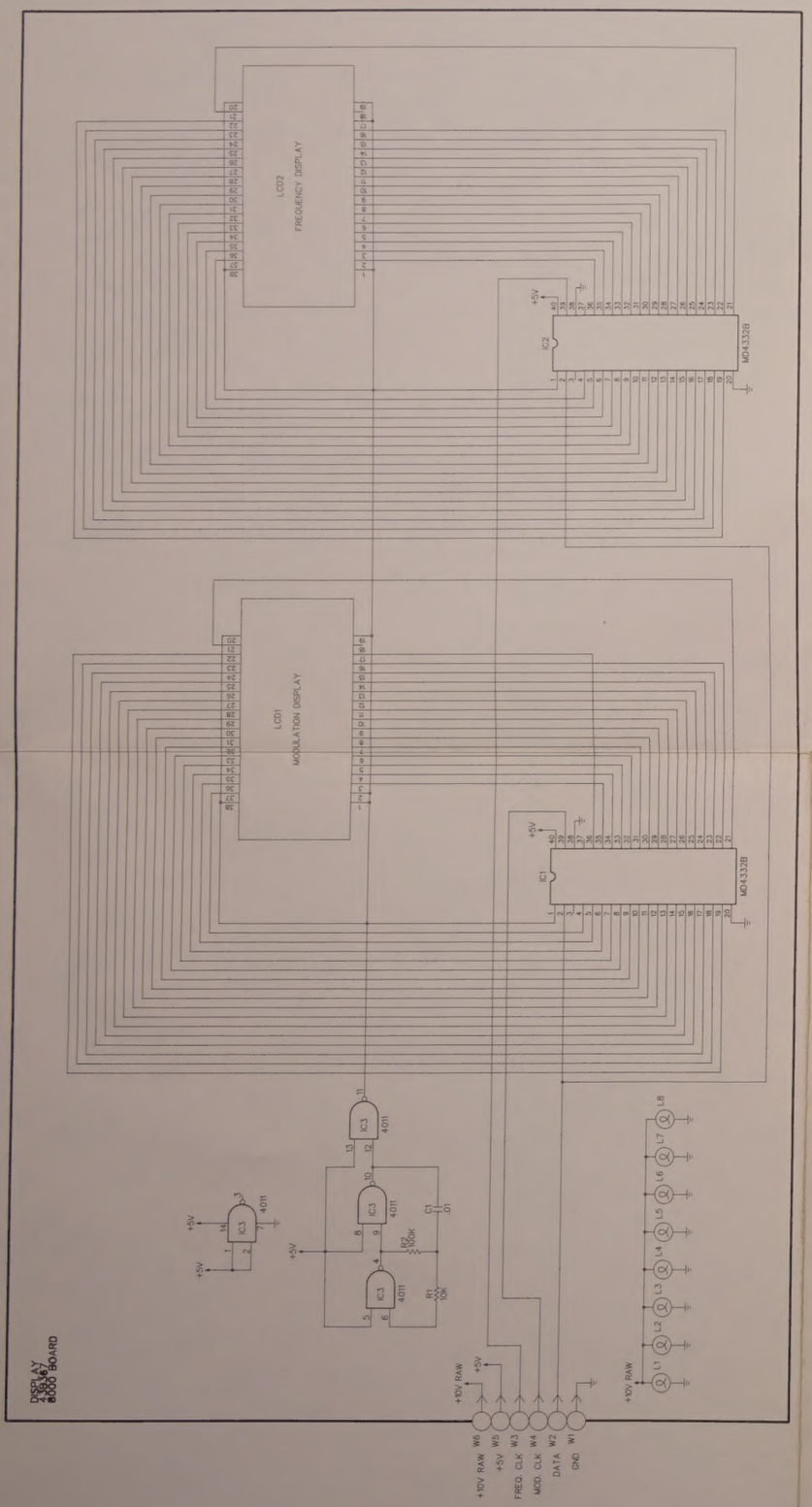
This sheet includes
board numbers 6000, 7000

SHEET 7

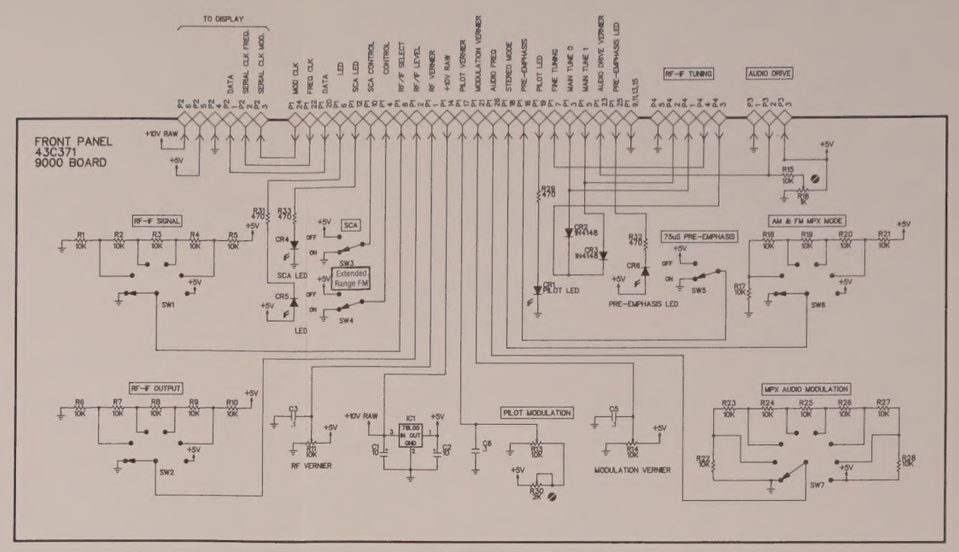
ATTENUATOR
43B361
7000 BOARD



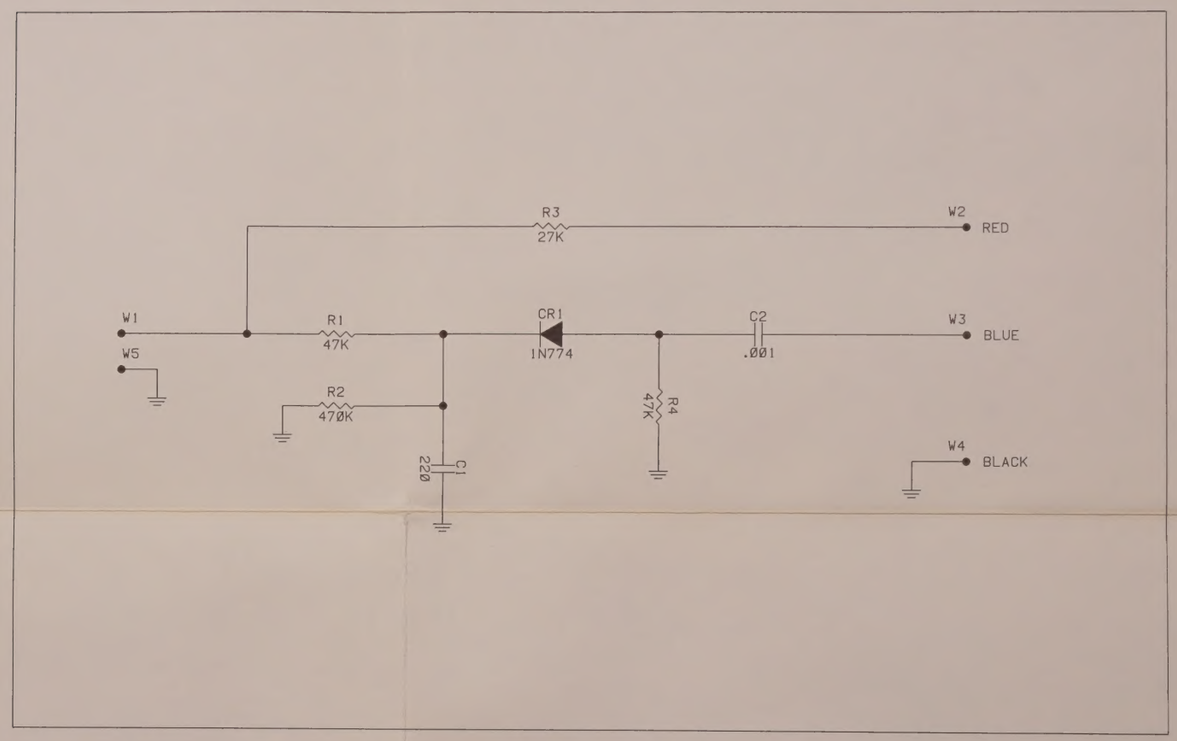
"7000" ATTENUATOR BOARD

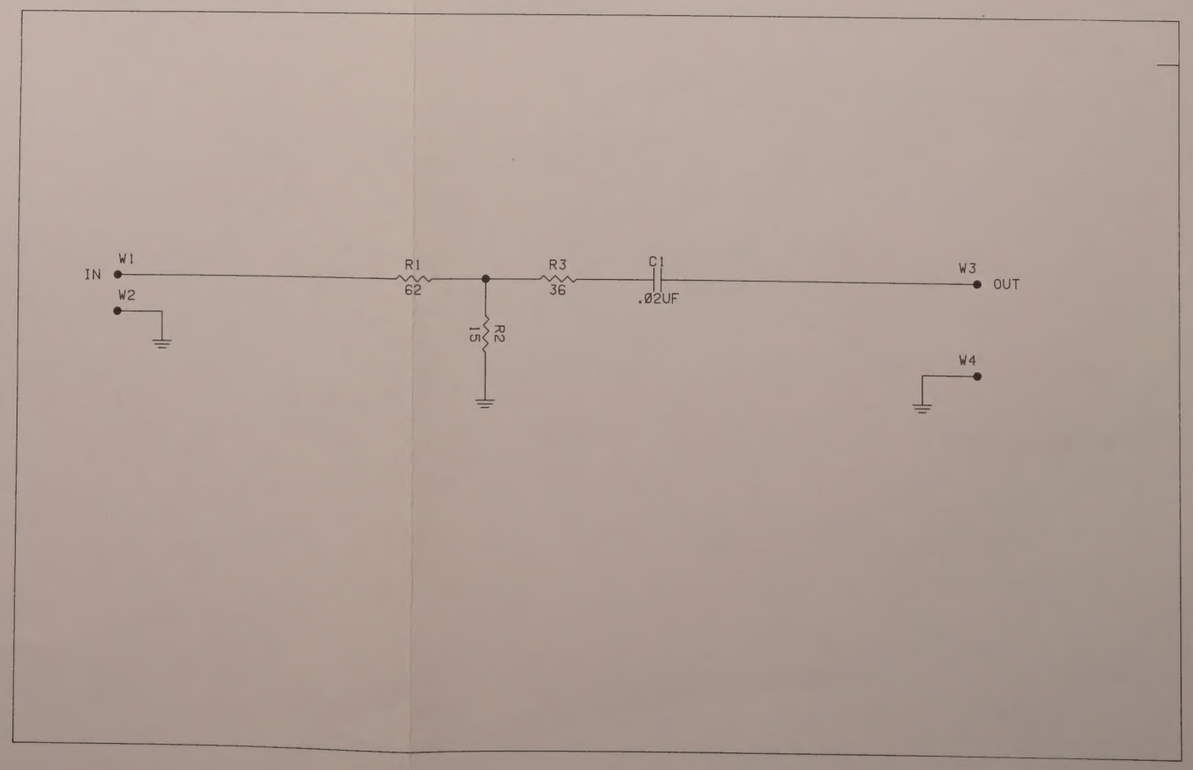


"8000" DISPLAY BOARD



"9000" FRONT PANEL BOARD





This sheet includes
Board numbers 8000, 9000
10,000 AM Test Leads.

SHEET 8

COUNTDOWN
43B383
10000 BOARD

AUDIO IN
P7
T1
R46 10 K
CR1 IN4148
CR2 IN4148
R56 20K
R57 10K
C40 2.5-18PF
IC13 NE5534
C23 16V 10UF
R26 47 OHMS
IC15 EL2003
C22 10UF 16V
C8 2.2UF 50V
R25 33
C26 100UF 16V
C7 2.2UF 50V
R24 33
I2
I1
R49 1 K
R50 1 K
C32 .47
CR5 IN4148
CR4 IN4148
C31 .47
R52 1 K
R51 1 K
R35 1M
C37 1000 100V
R36 1M 100V
C36 1000
RT1 47V
RT4 100 25 C
RT3 100 25 C
P9
AUDIO OUT
(FRONT PANEL)

ISOLATED SUPPLY
+8V ISO
-8V ISO
ISO GND
P2
IC18 78L05
C41 2.2UF 50V
+5PLLV

POWER SUPPLY
+10V
-10V
P6
IC10 78L05
C2 2.2UF 50V
IC9 79L05
C1 2.2UF 50V
-5V

2.0MHz FROM DIG/MPX
P14
IC3 74LS90
IC4 74LS90
IC5 74LS90
IC6 74LS90
C15 .01
C9 .01
C10 .01
C11 .01
R53 39K

25Hz TO DIG/MPX
P13

IC17 74LS93
C39 .01
R54 39K
R55 3.9K
IC16 MF5
C38 .01

50KHz TO AUDIO
P10

100KHz TO PLL
P12

R9 10 OHMS
C6 2.2UF 50V
R47 3.3K
R6 120 OHMS
C5 2.2UF 50V
C25 .0022
C24 .0022
TR4 2N3906
TR3 2N3904
R12 1 K
R11 750 OHMS
R5 56 OHMS
R16 6.8K
C4 2.2UF 50V
R7 120 OHMS
R8 10 OHMS
C3 2.2UF 50V
IC1 74HC00
IC1 74HC00
IC1 74HC00
IC1 74HC00

R48 10 OHMS
C21 10UF 16V
IC8
IC2 145156
R1 150 OHMS
C16 .01
TP1
C19 .01
C18 .01
R38 100K
CR6 MVAM103
C17 .01
C35 330PF
L1 172UH
R45 100K
R39 8.2K
R40 16K
R41 16K
R4 300
C20 .022
C29 100UF 16V

P11
50-65KHz TO AUDIO

AUDIO LATCH
SERIAL DATA
SERIAL CLOCK
4 P1

"10,000" COUNTDOWN BOARD

SCHEMATIC REFERENCE	PART NO.	DESCRIPTION
C 27	24G208	Cap, Disc, 150 pF, 500 V, 10%,
C 28	24G499	Cap, Disc, .05 uF, 1 kV
C 29	24G256	Cap, Lytic, 20 uF, 400 V, +100/-0%
C 30-34	24G344	Cap, Poly, 47 pF, 160 V, 10%
C 35, 36	24G377	Cap, Poly, 30 pF, 630 V, 2.5%
CR 1-3, 5-10, 18, 19	50C5-2:A	Diode, Sil, 75 V, 4148
CR 11, 12	50G17	Diode, Hot, 50V, 10 mA, 501
CR 13-17	50G13-2	Diode, Pin, 110 V, 100mA, 5767
FL 1	33G304	Filter, Bandpass, 88-108 MHz
IC 1	69G29	IC, Reg, +5 V, 100 mA, 78L05
IC 6	69G189	IC, Op-Amp, Dual, Bifet, TL082
IC 7-9	69G235	IC, Microwave, 10 dB, MSA0304
IC 10	69G234	IC, Microwave, 12 dB, MSA0204
IC 12	69G195	IC, Reg, Adj, 1.5A, LM2931
IC 13	69G116	IC, Reg, -5V, 100 mA, 79L05
L 1-4	46G83	Inductor, Rad, .33 uH, 1000 mA, 10%
L 12	46G111	Inductor, Axial, 1 uH, 10%
L 18, 19	46G96	Inductor, Axial, 10 uH, 10%
L 5	46G99	Inductor, Rad, .68 uH, 1000 mA, 10%
L 6	46G103	Inductor, Axial, 100 uH, 84 mA, 10%
L 7, 8	46G169	Inductor, Axial, .18 uH, 10%
L 9, 10	46G168	Inductor, Axial, .22 uH, 10%
L 11	33G281	Mixer, SBL-1
L 13-16	41G18	Relay, Reed, 12 V, DPDT,
L 17	41G27	Relay, Reed, 12 V, DPST
R 21	15C26-15	Pot, MVPC Cerm, 1 K, 1/2 W, 20%
R 46	15C26-3	Pot, MVPC Cerm, 500, 1/2 W, 20%
TR 1-6	19A33-1	Trans, NPN, 2N3904
TR 7	19A34-1	Trans, PNP, 2N3906

AM Board (4000 BOARD)

C 1- 5, 8, 9, 91, 93	24G382	Cap, Rlytic, 10 uF, 16 V, 20%
C 7	24G382	Cap, Rlytic, 10 uF, 16 V, 20%
C 10- 23	24G483	Cap, Mylar, .01 uF, 50V, 5%
C 22, 57, 58, 87, 88	24G482	Cap, Mylar, .1 uF, 50 V, 5%
C 32-37, 80, 81	24G407	Cap, Rlytic, 47 uF, 25 V, +50/-10%
C 39-43	24G442	Cap, Rlytic, 100 uF, 16 V, +50/-10%
C 44-46	24G368	Cap, Disc, .001 uF, 100 V, 10%
C 47-49	24G384	Cap, Lytic, 2.2 uF, 50 V, 20%
C 50	24G314	Cap, Disc, 15 pF, 500 V, 5%, NPO
C 51-54	24G22	Cap, Disc, 330 pF, 1000 V, 10%
C 55	24G49	Cap, Disc, 390 pF, 600 V, 10%
C 62, 69	24G77	Cap, Disc, 20 pF, 500 V, 5%, NPO
C 65	24G75	Cap, Disc, 27 pF, 500 V, 5%, NPO
C 66	24G362	Cap, Trimmer, 2-10 pF, 100 V
C 67	24G353	Cap, Disc, 220 pF, 50 V, 20%, NPO
C 70	24G483	Cap, Mylar, .01 uF, 50 V, 5%
C 71, 72	24G368	Cap, Disc, .001 uF, 100 V, 10%

SCHEMATIC REFERENCE	PART NO.	DESCRIPTION
IC 4	69G95	IC, Dig, TTL, Quad Nand, 74LS26
IC 5, 6, 15, 44	69G233	IC, Microwave, 19 dB, MSA0104
IC 7, 8, 27	69G345	IC, Prescaler, 200 MHz, Dual Mod
IC 9, 10, 28	69G224	IC, PLL, Dual, 145156
IC 16	69G234	IC, Microwave, 12 dB, MSA0204
IC 17, 35-38	69G195	IC, Reg., Adj., 1.5A, LM2931
IC 18	69G135	IC, Reg, +12 V, 500 mA, 78M12
IC 19, 23, 26	69G29	IC, Reg, +5V, 100 mA, 78L05
IC 20, 24, 25, 39-42	69G147	IC, Reg, +8 V, 100 mA, 78L08, TTL
IC 21, 22	69G116	IC, Reg, -5V, 100 mA, 69L05
IC 29, 30, 31, 32	69G312	IC, MSA0185, Wideband Amp
IC 33, 43, 45	69G235	IC, Microwave, 10 dB, MSA0304
IC 34	69G65-B	IC, Switch, 1x8, 4051B
IC 46	69G172	IC, Res, Net, 5X10K, 6 Pin
L 1, 3, 14, 16, 18, 20	46G119	Inductor, Axial, 15 uH, 10%
L 2	26G177	Inductor, Adj., .509 uH NOM
L 4, 5, 10, 11	46G163	Inductor, Wireform, 250 nH
L 6, 7, 12, 13	46A26:B	Inductor, Axial, .17 uH, 5%
L 8, 24	46G103	Inductor, Axial, 100 uH, 10%
L 9	46G171	Inductor, Adj., .322 uH (NOM)
L 15	46G172	Inductor, Adj, .986 uH (NOM)
L 17	46G173	Inductor, Adj., .086 uH (NOM)
L 19, 21	46G174	Inductor, Adj, .0595 uH (NOM)
L 23	41G18	Relay, Reed, 12 V, DPDT
R 146	15C26-10	Pot, MVPC Cerm, 20 K, 1/2 W, 20%
R 19	15C26-24	Pot, MHPC Cerm, 10 K, 1/2 W, 20%
R 42, 48	15A36-1	Pot, VPC 20T Cerm., 1 K, 10%
R 45	15C26-15	Pot, MVPC Cerm, 1 K, 1/2 W, 20%
R 59	15C26-20	Pot, MVPC Cerm, 5 K, 1/2 W, 20%
R 30, 81	14G93-162	Res, Chip, 1.6K, 1/8 W, 5%
R 43	14A38-5113A	Res, Met.F, 5.11 K, 1/4 W, 1%
R 78	14G93-201	Res, Chip, 200, 1/8 W, 5%
R 79	14G93-821	Res, Chip, 820 0hm, 1/8 W, 5%
R 82, 90, 98, 106, 113	14G93-102	Res, Chip, 1 K, 1/8 W, 5%
R 83, 91, 99, 107	14G93-333	Res, Chip, 33 K, 1/8 W, 5%
R 84, 92, 100, 108	14G93-183	Res, Chip, 18 K, 1/8 W, 5%
R 85, 87	14G93-272	Res, Chip, 2.7 K, 1/8 W, 5%
R 86, 95, 101, 109	14G93-101	Res, Chip, 100, 1/8 W, 5%
R 89, 97, 104, 112	14G93-271	Res, Chip, 270 Ohm, 1/8 W, 5%
R 93, 103, 111	14G93-331	Res, Chip, 330, 1/8 W, 5%
R 96, 102, 110	14G93-152	Res, Chip, 1.5 K, 1/8 W, 5%
T 1, 2	28A99	Transform, RF, Small Core Balun
TR 1, 2, 7-10	19G73	Trans, NPN, MRF904
TR 3, 5	19A33-1	Trans, NPN, 2N3904
TR 4	19A34-1	Trans, PNP, 2N3906
TR 11	19G70	Trans, N-Chnl, 2N700

Power Supply Board (6000 BOARD)

T 1	28A112:C	Transformer, Power, SG80
C 2-9	24G424	Cap, Rlytic, 2200 uF, 25 V, +30/-10%
C 10, 11	24G556	Cap, Lytic, 10000 uF, 35 V

SCHEMATIC REFERENCE	PART NO.	DESCRIPTION
C 73	24G162	Cap, Disc, 62 pF, 500 V
C 74	24G349	Cap, Poly, 510 pF, 160 V, 5%
C 75	24G87	Cap, Mylar, .0022 uF, 50 V, 5%
C 76-79	24G231	Cap, Poly, 750 pF, 33 V, 5%
C 84, 85	24G83	Cap, Disc, 33 pF, 500 V
C 86	24G290	Cap, Disc, 39 pF, 500 V
C 89, 90	24G86	Cap, Disc, 10 pF, 500 V
CR 1	50C5-2:A	Diode, Sil, 75 V, 4148
CR 2	50C12-1	Diode, Zener, 6.2 V, 5%, 825
FL 1	33G270	Filter, 4.5 MHz Trap
FL 2	33G289	Filter, Bandpass, 5.5 MHz
IC 1-5	69G144	IC, Bal-Modltor, MC1496
IC 6	69G116	IC, Reg, -5V, 100 mA, 79L05
IC 7	69G263	IC, Prescaler, CA3232E
IC 8	69G130	IC, D/A, 8-Bit, DAC-0802
IC 9	69G46	IC, Op-Amp, Quad, Bifet, TL084
IC 10	69G29	IC, Reg, +5V, 100 mA, 78L05
IC 11	69G244	IC, CMOS, Quad 2 In Nor, 74HC02
IC 12	69G42	IC, Counter, Decade, 74LS90
IC 13	69G246	IC, CMOS, Flip-Flop, 74HC74
IC 14	69G195	IC, Reg, Adj, 1.5A, LM2931
IC 15	69G382	IC, High Speed Latch Comparator
L 1	46G103	Inductor, Axial, 100 uH, 10%
L 2	46G54	Inductor, Trimmer, 260 uH
L 3	46G9	Inductor, Axial, 10000 uH, 10%
L 7	46G119	Inductor, Axial, 15 uH, 10%
L 8, 9	46G96	Inductor, Axial, 10 uH, 10%
L 10, 11	46G140	Inductor, Axial, 1.5 uH, 10%
L 12	46G111	Inductor, Adj, 70 uH
L 13	46G198	Inductor, Adj, 1100 uH
L 14-17	46G195	Inductor, Axial, 68 uH
L 18-21	46G196	Inductor, Axial, 120 uH
L 22, 23	46G197	Inductor, Axial, 220 uH
R 58-60	15A34-2	Pot, 10 K
R 86	15C26-20	Pot, MVPC Cerm, 5 K, 1/2 W, 20%
R 110, 111	15A34-1	Pot, 5 K
R 1, 2	14A38-3923A	Res, Met.F, 3.92 K, 1/4 W, 1%
R 3, 4	14A38-2403A	Res, Met.F, 2.4 K, 1/4 W, 1%
R 5	14A38-2003A	Res, Met.F, 2 K, 1/4 W, 1%
R 6, 49	14A38-1603A	Res, Met.F, 1.6 K, 1/4 W, 1%
R 47, 48	14A38-4703A	Res, Met.F, 4.7K, 1/4 W, 1%
R 69	14A38-1003A	Res, Met.F, 1 K, 1/4 W, 1%
R 70, 71	14A38-1004A	Res, Met.F, 10 K, 1/4 W, 1%
R 75	14A38-4702A	Res, Met.F, 470 1/4 W, 1%
R 87	14A38-3653A	Res, Met.F, 3.65 K, 1/4 W, 1%
TR 1, 3, 4, 9, 10	19A33-1	Trans, NPN, 40 V, 2N3904
TR 5, 6, 8	19A34-1	Trans, PNP, 40 V, 2N3906
TR 7	19A44	Trans, NPN, 40 V, 2N4401

SCHEMATIC REFERENCE	PART NO.	DESCRIPTION
CR 1-10	16G10	Diode, Sil, 400 V, 1 A, 1N4004
IC 1	69658	IC, Comp, LM311
L 1-5	46G92	Inductor, Wireform, 50 uH, 1.5 A

Attenuator Board (7000 BOARD)

	24A254-2:A	Cap, FThru, .001 uF, 500 V, 20%
C 1	24G499	Cap, Disc, .05 uF, 1 kV
CR 1-5	50C5-2:A	Diode, Sil, 75 V, 4148
L 1-5	41G18	Relay, Reed, 12 V, DPDT
R 1-10	14G96-6191	Res, Chip, Melf, 60.9 Ohm, 1/4 W, 1%
R 11-15	14G96-1541	Res, Chip, Melf, 15.5 Ohm, 1/4 W, 1%

Display Board (8000 BOARD)

C 1	24G483	Cap, Mylar., .01 uF, 50V, 5%
D 1, 2	23A88	LCD, 4 1/2 Digits, .1%
IC 1, 2	69G92	IC, LCD, Driver, 4332, CMOS
IC 3	69G3-B	IC, Gate, Nand, Quad, 4011B, CMOS
L 1-8	20G33	Lamp, Incand, 12 V @ 55 mA

Front Panel (9000 BOARD)

C 1, 2	24G382	Cap, Rlytic, 10 uF, 16V, 20%
CR 1, 4-6	20G14	Lamp, LED, 2V, 10 mA, MV5054-1
CR 2, 3	50C5-2:A	Diode, Sil, 75V, 4148
IC 1	69G29	IC, Reg, +5V, 78L05
R 11, 13, 14	15B38	Pot, Vernier
R 16, 30	15A27-3	Pot, MHPC Plst, 1 K, 1/3 W, 20%
R 34, 45	15C26-18	Pot, MVPC Cerm, 2K, 1/2 W, 20%
SW 1, 2, 6, 7	25G358	Switch, rotary, 1 pole; 12 pos.
SW 3, 4	25G405	Switch, Pushbutton, 2 station
SW 5	25G404	Switch, Pushbutton, 1 station

Countdown Board (10,000 BOARD)

C 1-8, 41	24G384	Cap, Lytic, 2.2 uF, 50 V, 20%
C 9-11, 15-19, 38, 39	24G483	Cap, Mylar, .01 uF, 50 V, 5%
C 20	24G195	Cap, Mylar, .022 uF, 250 V, 10%
C 21-23	24G382	Cap, Rlytic, 10 uF, 16 V, 20%
C 24, 25	24G487	Cap, Mylar, .0022 uF, 50 V, 5%
C 26, 29	24G447	Cap, Rlytic, 100 uF, 16 V, 10%
C 31, 32	24G496	Cap, Mylar, .47 uF, 50 V, 10%
C 36, 37	24G422	Cap, Rlytic, 100 uF, 100 V, +30/-10%
C 40	24G387	Cap, Trim, 2.5-18 pF
CR 1, 2, 4, 5	50C5-2:A	Diode, Sil, 75 V, 4148
CR 6	50G27	Diode, Vari-Cap, MVAM109
I 1, 2, 35	20G22	Lamp, Incand, 12 V, 30 mA
IC 1	69G267	IC, Gate, Quad 2 Input, 74HCD0

SCHEMATIC REFERENCE	PART NO.	DESCRIPTION
IC 2	69G224	IC, PLL, Dual, 145156
IC 3-6, 8	69G42	IC, Counter, Decade, 74LS90
IC 9	69G116	IC, Reg, -5V, 100 mA, 79L05
IC 10, 18	69G29	IC, Reg, +5V, 100 mA, 78L05
IC 13	69G328	IC, Op-Amp, NE5534, Lo Noise
IC 15	69G330	IC, Buffer, Pwr Amp, EL2003
IC 16	69G348	IC, Switched Capacitor Filter
IC 17	69G163	IC, Counter, 4 Bit, 74LS93
L 1	46G175	Inductor, Adj, 172 uH Nominal
R 57	15C26-24	Pot, MHPC Cerm, 10 K, 1/2 W, 20%
RT 1	33G262	MOV, 47 V, 10%
RT 3, 4	33G285	Thermistor, 100 Ohm, @ 25 Deg.C.
T 1	28A113	Transformer, 1:1, Lo Noise
TR 3	19A33-1	Trans, NPN, 2N3904
TR 4	19A34-1	Trans, PNP, 2N3906

Chassis Mounted Components

	25G403	Switch, Lighted Rocker, Gray
	44G20	Fuse, Slo-Blo 3AG, 1 Amp, 250 V
	8B387	Escutcheon, Front panel
	8B388	Escutcheon, Rear Panel
	256406	Rotary, Tuning, Push- Push

PLL Board (5000 BOARD)

C 1	24G464	Cap, Disc, 120 pF, 500 V, 5%, NPO
C 2	24G496	Cap, Mylar, .47 uF, 50 V, 10%
C 3	24G42	Cap, Disc., .005 uF, 500 V, +80/-20%
C 4, 23, 156	24G483	Cap, Mylar, .01 uF, 50 V, 5%
C 5, 6, 9, 11, 14, 16, 129, 131, 136, 150, 153, 157	24G368	Cap, Disc, .001 uF, 100 V, 10%
C 7	24G49	Cap, Disc, 3390 pF, 600 V, 10%
C 8, 27, 33, 40, 51, 58	24G77	Cap, Disc, 20 pF, 500 V, 5%, NPO
C 10, 12, 13, 15, 18, 19, 31, 32, 34, 52, 143, 149, 154, 161	24G482	Cap, Mylar, .1 uF, 50V, 5%
C 17, 142	24G410	Cap, Rlytic, 220 uF, 25 V, +50/-10%
C 20	24G474	Cap, Trim, 5.1-50 pF, 250 V
C 21	24G113	Cap, Disc, 270 pF, 500 V, 10%
C 22, 42, 59-62, 76, 87, 89, 97, 98, 110, 112, 122, 123, 158, 159	24G382	Cap, Rlytic, 10 uF, 16 V, 20%
C 24	24G75	Cap, Disc, 27 pF, 500 V, 5% NPO
C 25, 46	24G452	Cap, Disc, 8.2 pF, 100 V, 5%, NPO
C 28, 41, 44, 75	24G450	Cap, Rlytic, 1 uF, 50 V, 20%
C 29, 30, 43	24G317	Cap, Disc, 36 pF, 500 V, 5%, NPO
C 30, 35, 39, 53, 57, 160	24G82	Cap, Disc, 100 pF, 500 V, 20%, NPO
C 36, 38, 54, 56	25G290	Cap, Disc, 39 pF, 500 V, 10%, NPO
C 37, 55	24G71	Cap, Disc, 130 pF, 500 V, 10% NPO
C 45	24G324	Cap, Disc, 12 pF, 500 V, 5%, NPO
C 47-49	24G290	Cap, Disc, 39 pF, 500 V, 10%, NPO
C 50	24G482	Cap, Mylar, .1 uF, 50 V
C 63-68, 71-73, 88, 103, 111, 124, 130, 137-139, 141, 149	24G442	Cap, Rlytic, 100 uF, 16 V, +50/-10%
C 69, 70, 74	24G437	Cap, Rlytic, 470 uF, 25 V, +100/-20%
C 77-81, 90, 104, 113, 125	24G465	Cap, Chip, .01 uF, 50 V, 10%
C 82	24G439	Cap, Chip, 8.2 pF, 50 V, 10%
C 83, 107	24G507	Cap, Chip, 27 pF, 50 V, 10%, NPO
C 84, 95, 96, 99, 108, 119120144	24G438	Cap, Chip, 10 pF, 50 V, 10%, NPO
C 85, 92, 101, 115, 128	24G494	Cap, Chip, 100 pF, 50 V, 10%, NPO
C 86, 100, 109, 121	24G508	Cap, Chip, 36 pF, 50 V, 10%, NPO
C 93, 105, 116, 127, 134, 135155	24G419	Cap, Chip, .001 uF, 50 V, 20%
C 94	24G516	Cap, Chip, 30 pF, 50 V, 10%, NPO
C 106	24G521	Cap, Chip, 39 pF, 5%, 50 V, NPO
C 117	24G522	Cap, Chip, 25 pF, 5%, 50 V, NPO
C 118	24G515	Cap, Chip, 20 pF, 50 V, 10%, NPO
C 133	24G368	Cap, Disc, .001 uF, 100 V, 10%
CR 1-6, 9-11, 17, 21-28	50C5-2:A	Diode, Sil, 75 V, 4148
CR 12-16, 18-20	50G18	Diode, Vari, 30 V, 20 pF, 10%, MV209
IC 1	69G267	IC, Gate, Quad 2-Input, 74 HC00
IC 2	69G46	IC, Op-Amp, Quad, Bifet, TL084
IC 3, 11-14	69G63	IC, Op-Amp, Single, Bifet, TL081

NOTES:

1. All resistances in ohms.
2. All capacitances greater than one are in pF, less than one in uF, unless otherwise indicated.
3. Board interconnection notes:
   - ☐ denotes a single push-on type connector.
   - ○ denotes wire soldered to PC board.
   - ◇ denotes molex connection. Numbers inside or along side indicate the pin number of the plug-in connector.
4. All controls jacks, and displays on exterior of unit are shown with box around the name. [ ]

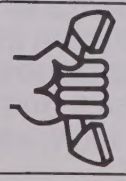
⚠WARNING

Avoid damage to parts caused by static electricity!

Most solid-state devices and film resistors are susceptible to damage due to discharge of static electricity. Observe the following precautions when a PC board is removed from the unit, or when handling components:

1. The person handling the part must be grounded through a 1 megohm resistor via a wrist strap or similar ground connection.
2. A PC board or component should never be placed on an insulated surface. The surface must be grounded (through a 1 megohm resistor) and conductive.
3. All replacement parts must be left in a completely enclosed, conductive container or package until ready for use. The person removing the part from the container must be properly grounded. All parts susceptible to static damage are shipped in conductive containers when ordered from the Sencore Service Department.

Components not listed are standard replacement parts and may be purchased locally. When ordering parts, please specify instrument model number, schematic reference, part number, and description. Please include remittance (check or money order) with your order, otherwise invoice will be shipped C.O.D. Minimum billing is $5.00



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